AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently amended) An optical fuse comprising:

a medium constituting a structure in which a light-emitting end of a first optical waveguide is coupled to a light-incident end of a second optical waveguide across said medium, said medium being transparent to light passing through said structure; and

a light-absorbing body ~~adapted~~ to absorb a portion of said light and generate heat to cause irreversible change to said medium by increased heat generation of said light-absorbing body when light intensity passing through said medium exceeds a critical light intensity, said light-absorbing body contacting at least a portion of an outer peripheral surface of said medium in such a manner as to allow a part of light emitted from said light-emitting end into said medium to reach said light-absorbing body,

wherein light-absorbing body is located outside of propagation region of light travelling inside the medium, and

wherein the optical fuse is for an optical circuit which transmits light while confining the light in the optical waveguides.

2. (Original) The optical fuse as defined in claim 1, wherein said medium is formed to allow a cross-sectional area orthogonal to a propagation direction of light therein to have a

minimum value at a position located in a zone of said medium interposed between said light-emitting end and said light-incident end.

3. (Previously presented) The optical fuse as defined in claim 1 or 2, wherein at least one of said first and second light waveguides consists of an optical fiber, and said structure includes a fixing member for fixing said optical fiber, said fixing member being disposed away from an interface between said medium and said light-emitting or light-incident end comprised of said optical fiber, in such a manner as to allow a zone of said optical fiber between said fixing member and said interface to be bent.

4 and 5. (Cancelled).

6. (Previously presented) The optical fuse as defined in claim 1, wherein said medium is an amorphous material and said irreversible change is crystallization of said medium.

7. (Currently amended) An optical fuse comprising:

a medium constituting a structure in which a light-emitting end of a first optical waveguide is coupled to a light-incident end of a second optical waveguide across said medium, said medium being transparent to light passing through said structure; and

a light-absorbing body ~~adapted~~ to absorb a portion of said light and ignite to cause irreversible change to said medium when light intensity passing through said medium exceeds a

critical light intensity, said light-absorbing body contacting at least a portion of an outer peripheral surface of said medium in such a manner as to allow a part of light emitted from said light-emitting end into said medium to reach said light-absorbing body,

wherein light-absorbing body is located outside of propagation region of light travelling inside the medium, and

wherein the optical fuse is for an optical circuit which transmit light confining in the optical waveguides.

8. (Previously presented) The optical fuse as defined in claim 7, wherein said light-absorbing body is an explosive and said irreversible change is destruction of said medium.